

Name: _____

p1103: Factoring with box when $a = \text{prime}$ (v0)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18 , until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	-6
2x	$2x^2$	$-12x$
3	$3x$	-18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $7x^2 + 34x + 24$.

*	x	4
7x	$7x^2$	$28x$
6	$6x$	24

ANSWER: $(7x + 6)(x + 4)$

Question 2

Use the box to factor $5x^2 - 3x - 14$.

*	x	-2
5x	$5x^2$	-10x
7	7x	-14

ANSWER: $(5x + 7)(x - 2)$

Question 3

Use the box to factor $3x^2 - 16x + 21$.

*	x	-3
3x	$3x^2$	-9x
-7	-7x	21

ANSWER: $(3x - 7)(x - 3)$